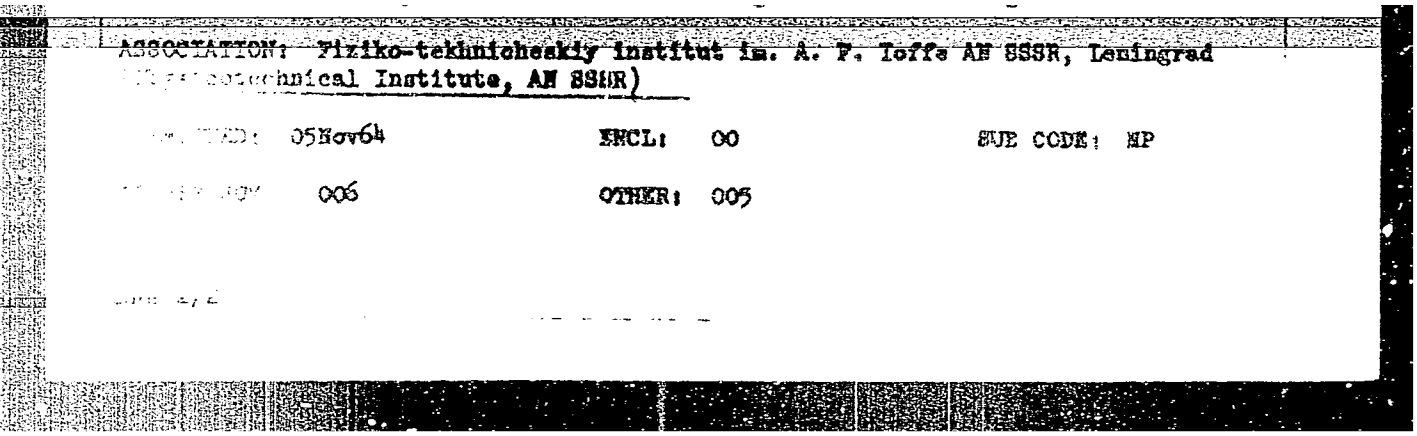
ACCESSION NR: AP5010727

the 3-cm beam, by a procedure described in the earlier paper. A major
the work is the presence of large negative shifts in the studying of the



ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 05Nov64 ENCL: 00 SUB CODE: MP

NO REF SOV: 006 OTHER: 005

EWT(d)/EWT(l)/EWT(m)/EPF(c)/EEC(k)-2/EPF(n)-2/EPR/T/EWP(t)/EWG(c)/
ETC(m)/Pu-4 IJP(c) JD/WW

ACCESSION NR: AP5010756 UR/0181/65/007/004/1263/1264

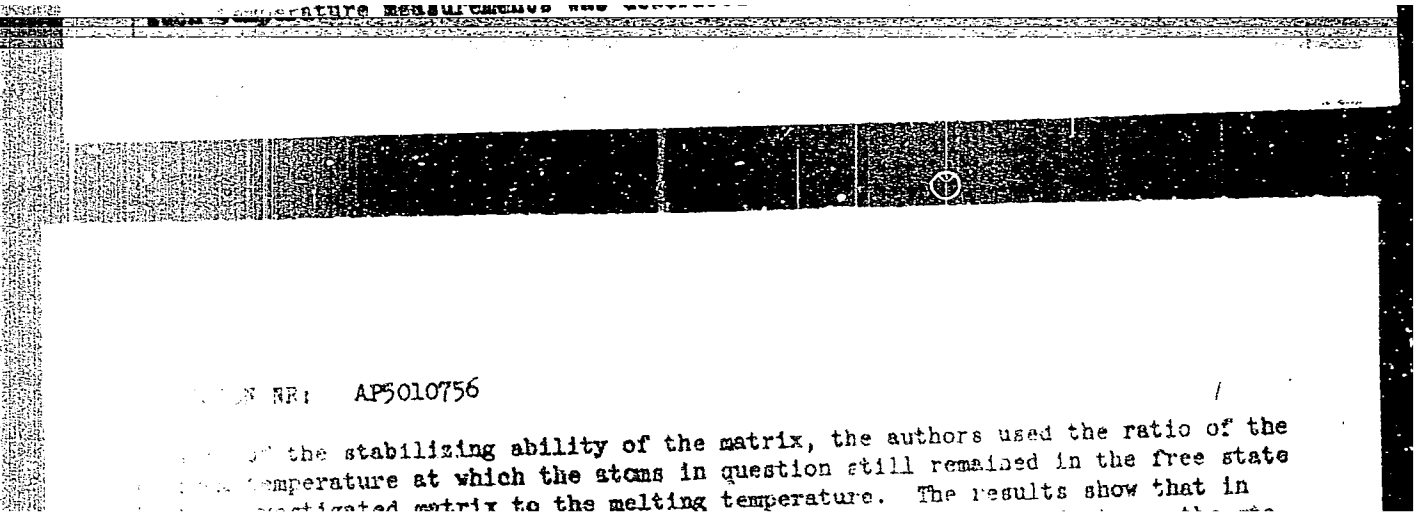
AUTHOR: Zhitnikov, R. A.; Kolesnikov, N. V.

TITLE: Maximum temperatures under which stability is retained for free atoms captured in different media at liquid-nitrogen temperature

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1263-1264

TOPIC TAGS: atom capture, atom stabilization, molecular matrix, diffusion, low temperature research

ABSTRACT: This is a continuation of earlier work (ZhETF v. 43, 1186, 1962 and ... in which capture and stabilization of atoms of different elements was attained in various molecular matrices at liquid-nitrogen temperature. The present



of the stabilizing ability of the matrix, the authors used the ratio of the temperature at which the atoms in question still remained in the free state [illegible] matrix to the melting temperature. The results show that in

EWT(m)/EWP(t)/EWP(b) [illegible]

ACCESSION NR: AP5014570 UR/0181/65/007/006/1710/1716

AUTHOR: Zhitnikov, R. A.; Kolesnikov, N. V.

TITLE: Hyperfine structure of paramagnetic resonance spectra of free atoms of Ag, Au, and Cu stabilized in a benzene matrix at liquid-nitrogen temperatures

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1710-1716

TOPIC TAGS: silver, gold, copper, hyperfine structure, line splitting, epr spectrometry

ABSTRACT: This is a continuation of earlier work by the authors (FTT v. 6, [illegible] and preceding papers) and is devoted to the stabilization of the [illegible] of Ag, Au, and Cu in benzene and to an investigation of their paramagnetic resonance spectra, as well as to an application of the theory of F. J. Adrian (J. Chem. Phys. v. 82, 782, 1960) and of U. A. Jen et al. (Phys. Rev. v. [illegible], 1962) to these substances. The samples were produced by a condensation method using apparatus and a procedure described earlier (FTE no. 3,

Card 1/2

ACCESSION NR: AP5014570

...1964). The observation and recording of the paramagnetic resonance spectra ... likewise carried out by a previously described procedure, using an X-band ... spectrometer [EI-01]. The hyperfine structure splitting and the g factors ... calculated with the aid of the Breit-Rabi formula, in accordance with the ... proper procedure. The results indicate the possibility of stabilizing the Ag, Au, and Cu atoms in a benzene matrix at temperatures much higher than that of liquid nitrogen. Gold remains stable at temperatures above 100K, while ... the silver atoms remain stable up to 100K. In the case of silver and ... copper, the benzene matrix contains two capture places. The matrix displacements turn out to be negative and quite large in magnitude, -7 to -12% for Ag ... and -25 to -29% for Cu. These displacements are in good agreement with ... theoretical changes in the splitting of the hyperfine structure of stabilized atoms. Orig. art. has: 3 figures, 8 formulas, and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical institute, AN SSSR)

SUBMITTED: 21Dec64 ENCL: 00 SUB CODE: SS, NP

NR REF SOV: 006 OTHER: 006

Card 2/2

ZHITNIKOV, R.A.; KOLESNIKOV, N.V.

Method for temperature studies in analyzing the paramagnetic resonance of free atoms stabilized in various media. Prib. i tekhn.eksp. 10 no.5:236-237 S-O '65. (MIRA 19:1)

1. Fiziko-tekhnicheskiy institut AN SSSR, Leningrad. Submitted July 31, 1964.

ACC NR: AP7005340 SOURCE CODE: UR/0181/67/009/001/0162/0166

AUTHOR: Zhitnikov, R. A.; Kolesnikov, N. V.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Theoretical analysis of the matrix shifts of the splittings of the hyperfine structure for the atoms Cu, Ag, and Au, stabilized in a polar matrix (H_2O)

SOURCE: Fizika tverdogo tela, v. 9, no. 1, 1967, 162-166

TOPIC TAGS: copper, silver, gold, hyperfine structure, line splitting, polar molecule, ground state

ABSTRACT: This is a continuation of earlier work (FTT v. 7, 1710, 1965 and earlier) where experimental data were obtained on the hyperfine structure of the ground states of atoms stabilized in polar matrices. The present investigation is devoted to a theoretical interpretation of these data for the atoms Cu, Ag, and Au captured in a matrix of polar H_2O molecules, and to theoretical estimates of the variation of the hyperfine structure for atoms of the same elements, but stabilized in a nonpolar molecular matrix (C_6H_6), also carried out by the authors earlier. The present calculations are based on the results of formulas derived in the earlier work. The comparison of the theoretical calculation with the experimental data shows that the matrix shifts in a polar matrix for the Ag and Au atoms can be satisfactorily explained on the basis of theoretical ideas advanced by E. J. Adrian (J. Chem. Phys.

Card 1/2

ACC NR: AP7005340

v. 32, 972, 1960) and C. K. Jen et al. (Phys. Rev. v. 126, 1749, 1962). In the case of copper, a slight discrepancy between the theory and the experiment is noted and its causes are discussed. The main conclusion of the work is that the principal part of the variation of the hyperfine structure of the stabilized atoms is not determined by the polarity of the molecules of the matrix. The authors thank I. M. Band for programming the calculations with the BESM-2 computer of the Academy of Sciences SSSR. Orig. art. has: 2 figures, 3 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 09Jun66/ ORIG REF: 005/ OTH REF: 007

Card 2/2

21393

S/120/61/000/002/003/042
E032/E114

24.6810

AUTHORS: Kovrigin, O.D., Kolesnikov, N.V., and Latyshev, G.D.

TITLE: A large beta-spectrometer with double focussing

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.2, pp. 19-25

TEXT: (First read at the 10th Annual Conference on Nuclear Spectroscopy, Moscow, January 19-27 1960). A description is given of a double-focussing spectrometer having an equilibrium orbit radius of 500 mm. The momentum resolution varies between 0.5 and 0.08% when the relative solid angle is varied between 0.65 and 0.15%. The design of the magnet is illustrated in Fig.1. The magnet is made of "steel-10". In Fig.1, 1 is the electro-magnet, 2 is the vacuum chamber, 3 is the receiving slit, 4 is the diffusion-pump inlet, 5 is a stilbene crystal, 6 is a light pipe, 7 is a photomultiplier, 8 is a magnetic field meter, 9 is a lead screen, 10 is the source, 11 is a vacuum gauge, 12 is a slit and 13 are auxiliary coils. The diameter of the pole pieces is 1300 mm and the gap at r = 650 mm is 246.3 mm. The profile of the pole pieces and the corresponding radial magnetic field distribution are shown in Fig.2. The Pavinskiy

Card 1/6

21393

S/120/61/000/002/003/042
E032/E114

A large beta-spectrometer with double focussing

field (P.P. Pavinskiy, Izv.AN SSSR, seriya fiz., 1954, 18, No.2, 175; Ref.2) is reproduced to an accuracy of 5 x 10^{-4} (curve 2). The final pole profile is given by Table 1. The source and the detector slit can be replaced without releasing the vacuum. The magnetic field can be varied between 10 and 200 oe which corresponds to the focussing of electrons with energies between 20 kv and 2.5 Mev. The magnetic field is stabilized to within ± 10^{-4}. Fig.6 shows the conversion spectrum of Ba^{137} obtained with the spectrometer; a - solid angle 0.36%; б - solid angle 0.51% (K line). The main experimental results obtained with this spectrometer are compared with those obtained by other workers in Table 2.

There are 6 figures, 2 tables and 17 references: 9 Soviet and 8 non-Soviet. Acknowledgements are expressed to L.N. Fedulov, A.V. Zolotavin and Ye.P. Grigor'yev for collaboration and technical assistance.

ASSOCIATION: Institut yadernoy fiziki, AN KazSSR (Institute of Nuclear Physics, AS Kaz.SSR)

Card 2/6

S/707/62/005/000/008/014
D290/D308

AUTHORS: Kovrigin, O.D., Kolesnikov, N.V. and Latyshev, G.D.

TITLE: The preservation of the topography of the magnetic field in a β-spectrometer

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy, v. 5. Alma-Ata, 1962. Fizika chastits vysokikh energiy. Struktura yadra, 107-110

TEXT: The authors give a method of preserving the theoretically required topography of the magnetic field in a double-focussing β-spectrometer while H_o (the magnetic field in the equilibrium orbit) changes from 10 to 200 oersted (equivalent to β-particle energies of 20-2, 500 kev). The quantity $D = 1 - H_e(300)/H_t(300)$ was measured over the working range of H_o ($H_t(300)$ and $H_e(300)$ are respectively the theoretical and experimental magnetic fields at a radius of 300 mm; (the equilibrium orbit has a radius of 500 mm), and was found to be about 2×10^{-2}; such values of D would cause considerable instrumental broadening of the lines in β-ray spectra. D

Card 1/2

The preservation of the topography ...

was reduced to $\pm$ 3 x 10^{-4} by placing additional coils at the internal surfaces of the magnet shoes; the current needed to keep D at this value was measured over the working range of H_o. Hysteresis in the material of the magnet may require the current in the additional coils to be altered slightly. The instrument was used to measure the natural line-widths in the conversion spectra of Th-B and ^{137}Ba. There are 6 figures.

Card 2/2

L 05834-67

ACC NR: AP6028098 (N) SOURCE CODE: UR/0229/66/000/004/0028/0030

AUTHOR: Kolesnikov, N. V.; Neymand, Ye. M.

ORG: None

TITLE: A noise-free ship tachometer

22
B

SOURCE: Sudostroyeniye, no. 4, 1966, 28-30

TOPIC TAGS: marine equipment, tachometer

ABSTRACT: The authors describe a tachometer developed at the "Vibrator" plant which satisfies the reliability and noise level requirements for ship operation. The tachometer uses a special electric machine with an arc stator and a rotor which is fixed to the shaft. The stator is fixed next to the shaft at a given distance from the rotor. The rotor does not have any kind of electric contacts or windings but is equipped with permanent magnets. The measured rotation of the shaft is transformed by a three-phase synchronous generator into a-c whose frequency is directly proportional to the measured rate of rotation. An expression for this is given. Thus as the rotor mounted on a shaft turns, three-phase a-c voltage is generated in the stator windings which is fed in turn to synchronous electric indicators. Diagrams and specifications for the unit are given. This tachometer satisfies all requirements and is the finest instrument of its kind. Orig. art. has: 5 figures, 2 tables, 6 formulas.

SUB CODE: 13/ SUBM DATE: None

Card 1/1 afe

UDC: 629.12.056.2:534

MAGARSHAK, Boris Grigor'yevich; KRASIL'SHCHIKOV, L.B., kand. tekhn. nauk, retsenzent; KOLESNIKOV, N.V., inzh., retsenzent; KITAYENKO, G.I., kand. tekhn. nauk, nauchn. red.; OZEROVA, Z.V., red.

[Marine electrical measuring instruments; a reference book] Sudovye elektroizmeritel'nye pribory; spravochnik. Leningrad, Sudostroenie, 1965. 411 p. (MIRA 18:8)

Kolesnikov, N.V.

25(2) SOV/19-59-11-239/277

AUTHORS: Basin, V.S., Bilinskiy, D.M., Bogachev, S.Ya., Ivanchenko, I.P., Kryat, P.I., Kolesnikov, N.V., Prisyashnyuk, P.P., Piskunov, A.K., and Ushakov, A.F.

TITLE: A Moving Platform for Thinning Out Sugar Beets

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 11, pp 54-55 (USSR)

ABSTRACT: Class 65a, 32. Nr 120413 (604482/30 of 21 July 1958). Depending on the Author's Certificate Nr 117391. The platform has the form of a metal frame mounted on two wheels and provided with seats for workers and with a tent to protect the workers against sun rays. To cut the metal consumption, the platform is designed in the form of multiseat sections which are adjustable in height by means of a screw mechanism.

Card 1/1

Kolesnikov, N.V.

25(2)

SOV/19-59-2-43a/600

AUTHORS: Basin, V.S., Bilinskiy, D.N., Bogachev, S.Ya., Ivanchenko, I.P., Kuzin, P.I., Kolesnikov, N.V. Kutsuruba, N.V., Prisyazhnyuk, F.F., Grap'yan, N.P., Ushakov, I.F., and Khmelevskiy, N.N.

TITLE: A Versatile Trailing Machine for the Cultivation of Sugar Beets

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 2, p 92 (USSR)

ABSTRACT: Class 45b, 11. Nr 117391 (604481 of 21 July 1958). A machine consists of a sowing unit, a cultivator, and a seedling fertilizer unit, designed to be trailed by tractor. To extend the versatility and cut the metal needed in the construction of the machine, it is mounted on a single-beam frame with wheels and drive units, and the drives are placed at the ends of the beam. The design permits successive sowing, thinning-out, inter-row cultivation, and dressing of sugar beets.

Card 1/1

KOLESHIKOV, N.V., aspirant

Chopping grass for ensilaging. Zhivotnovodstvo 23 no.6:73-76 Je '61. (MIRA 16:2)

1. Vsesoyuznogo nauchno-issledovatel'skogo instituta kormov imeni V.R.Vil'yamsa.
(Ensilage) (Grasses)

KOVRIGIN, O.D.; KOLESNIKOV, N.V.; LATYSHEV, G.D.

Conservation of the magnetic field topography in a beta-ray spectrometer. Trudy Inst. iad. fiz. AN Kazakh. SSR 5:107-110 '62. (MIRA 15:4)

(Magnetic fields) (Beta-ray spectrometer)

KOLESNIKOV, N.V., kand. sel'skokhoz. nauk

Ensilage perennial grasses. Zemledelie 26 no.6:78-79 Je '64.
(MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kormov.

NIKOLAYEV, Vladimir Ivanovich; KOLESNIKOV, N.V., retsenzent; BUKHTEYEV, P.I., nauchn. red.; ROZENGAUZ, N.M., red.

[Control of marine power plant installations] Kontrol' raboty sudovykh energeticheskikh ustanovok. Leningrad, Sudostroenie. Pt.1. 1965. 239 p. (MIRA 18:5)

LUBOCHKIN, Boris Iosifovich, dotsent, kand.tekhn.nauk; LYSENKO, Vsevolod Konstantinovich, dotsent, kand.tekhn.nauk; FAYVUSHEVICH, V.M., retsenzent; KOLESHIKOV, O.G., starshiy prepodavatel', retsenzent; ALEKSANDROV, L.A., red. Prinimal uchastiye KUDINOV, M.N., red.; TIKHONOVA, Ye.A., tekhn.red.

[Marine steam boilers and their operation] Sudovye parovye kotly i ikh ekspluatatsiia. Izd-vo "Morskoi transport," 1960. 590 p. (MIRA 14:4)

1. Zamestitel' nachal'nika Leningradskogo Arkticheskogo uchilishcha (for Fayvushevich). 2. Rostovskoye-na-Donu morekhodnoye uchilishcha (for Kolesnikov).
(Boilers, Marine)

KOLESNIKOV, Oleg Grigor'yevich; LALAYEV, G.G., inzh., retsenzent;
KEPKE, L.M., red.

[Auxiliary mechanisms and refrigerating machinery of ships]
Sudovye vspomogatel'nye mekhanizmy i kholodil'nye ustanovki.
Moskva, Transport, 1964. 525 p. (MIRA 18:4)

KOLESNIKOV, O.L., uchitel'.

Apparatus for measuring the pulse. Est.v shkole no.6:82-83 '53.
(MLRA 6:10)

1. Shkola no.25 g. Poltavy.
(Sphygmograph)

KOLESNIKOV, O.N. (Simferopol')

Plotting the graph of a second degree trinomial. Mat. v shkole no.6:70 N-D '59. (MIRA 13:3)
(Graphic methods) (Polynomials)

KOLESNIKOV, P., strogal'shchik

Creative initiative of our workers and establishment of work norms. Sots.trud 5 no.3:13-18 Mr '60. (MIRA 13:6)

1. Rostsel'mash.
(Rostov-on-Don--Agricultural machinery industry--Production standards)

KOLESNIKOV, P., geroy Sotsialisticheskogo Truda.

Noble initiative. Sel'. stroi. 12 no.5:6-8 My '58. (MIRA 11:6)

1.Predsedatel' Shebekinskogo rayispolkoma, Belgorodskoy oblasti.
(Belgorod Province--Farm buildings)

KOLESNIKOV, P., inzh.

Machine for packing silage. Zhivotnovodstvo 21 no.5:40-41 My '59. (MIRA 12:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.
(Ensilage) (Agricultural machinery)

YEREMENKO, A. (Lugansk); KOLESNIKOV, P. (Lugansk)

Soul of the brigade. Okhr. truda i sots. strakh. 6 no.8:27 Ag '63. (MIRA 16:10)

KOLESNIKOV, P.A.

34026 KOLESNIKOV, P.A. Pribor Dlya Izmyeryeniya Natyazhyeniya Osnovnykh Nityey Tyekstil Prom-st; 1949, No. 10, S. 32-33

SO: Letopis' Zhurnal'nykh Statey, Vol. 42, Moskva, 1949

KOLESNIKOV, P. A.

"Tension of Beam Threads in the Weaving Process and Its Effect on the Physicomechanical Properties and Breaking Quality of These Threads." Thesis of Degree of Cand. Technical Sci. Sub 23 Jan 50, Moscow Textile Inst.

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

KOLESNIKOV, P.A.

Technology

Equipment, installation, repair, and adjustment of mechanical looms of cotton industry
Moskva, Gos. nauchno-tekh. izd-vo legkoi. promysh., 1951

9. Monthly List of Russian Accessions, Library of Congress, August 1953, Uncl.

KOLESNIKOV, P.A., kandidat tekhnicheskikh nauk; SHPAYER, A.M., kandidat tekhnicheskikh nauk.

Standardizing of methods used in the evaluation of the wear properties of textile fabrics. Standartizatiia. no.5:70-75 S-O '56. (MLRA 10:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut shveynoy promyshlennosti.

(Textile fabrics--Testing)

KOLESNIKOV, Petr Alekseyevich; KOBYLYANSKIY, David Aronovich; MARGOLIN, Lazar' Yakovlevich; ISLANKINA, T.F., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Technical control in the clothing industry] Tekhnicheskii kontrol' v shveinom proizvodstve. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po legkoi promyshl., 1957. 343 p. (MIRA 10:11)
(Clothing industry)

KOLESNIKOV, P.A., kandidat tekhnicheskikh nauk.

Efficient use of raw materials for the manufacture of warm clothing.
Leg. prom. 17 no.5:4-5 My '57. (MLRA 10:6)
(Clothing industry)

KOLESNIKOV, P.A., kand. tekhn. nauk; PANKOVA, L.N., kand. tekhn. nauk

Practices of the East German clothing industry. Shvein. prom. no.4:34-36 Jl-Ag '59. (MIRA 13:2)

1.TSentral'nyy nauchno-issledovatel'skiy institut shveynoy promyshlennosti.
(Germany, East--Clothing industry)

KOLESNIKOV, P.A.; GUSHCHINA, K.G. (Moskva)

Use of "porolon" polyurethan foams in clothing. Shvein. prom. no. 6:8-9 N-D '60. (MIRA 14:1)
(Clothing, Cold weather) (Urethans)

KOLESNIKOV, P.A.

In memory of D.M.Mikhlin (June 7, 1887—June 30, 1959). Biokhimiia 25 no.2:383-384 Mr-Ap '60. (MIRA 14:5)
(MIKHLIN, DAVID MIKHAILOVICH, 1887-1959)

POPKOV, V.I., kand. tekhn. nauk; TER-OVAKIMYAN, I.A.; KOBYLYANSKIY, D.A.; KOLESNIKOV, P.A.; PERTSEV, G.V.; MARAKUSHEV, Ye.A.; RUSAKOV, S.I., retsenzent; PLEMYANNIKOV, M.N., red.; SHAPENKOVA, T.A., tekhn. red.

[Handbook for the clothing industry worker] Spravochnik shveinika. Moskva, Izd-vo nauchno-tekhn. lit-ry RSFSR. Vol.1. 1960. 335 p. (MIRA 15:1)

(Clothing industry)

KOLESNIKOV, Petr Alekseyevich, kand. tekhn. nauk; BYKASOVA, G.I., inzh., red.; VASIL'YEV, Yu.A., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Efficient principles for the design and manufacture of cold weather clothing] Ratsional'nye printsipy postroeniia teplozashchitnoi odezhdy; stenogramma lektsii, prochitannoi v LDNTP na seminare dlia rabotnikov shveinoi promyshlennosti. Leningrad, 1961. 29 p. (MIRA 15:3)
(Clothing, Cold weather)

KOLESHNIKOV, P.A.; SHPAYER, A.M.; TRET'YAKOVA, N.Ya. (Moskva)

The "R-5" relaxometer for determining the deformation components of fabrics. Shvein.prom. no.5:34-37 S-O '62. (MIRA 15:10)
(Textile fabrics—Testing)

KOLESNIKOV, P.A.; PETROCHENKO, Ye.I.; PSHENOVA, K.V.; ZORE, S.V.

Phenol substances of wheat roots as components of oxidative systems. Biokhimiia 30 no.2:368-374 Mr-Ap '65. (MIRA 18:7)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

KOLESNIKOV, Petr Alekseyevich; IZMEST'YEVA, A.Ya., retsenzent;
GABOVA, D.M., red.

[Heat insulating properties of clothing] Teplozashchitnye svoistva odezhdy. Moskva, Legkaia industriia, 1965. 345 p.
(MIRA 18:4)

KOLESNIKOV, P.A. (Moskva)

Classification of clothing and materials for their manufacture. Shvein. prom. no.4:5-7 Jl-Ag '65. (MIRA 18:9)

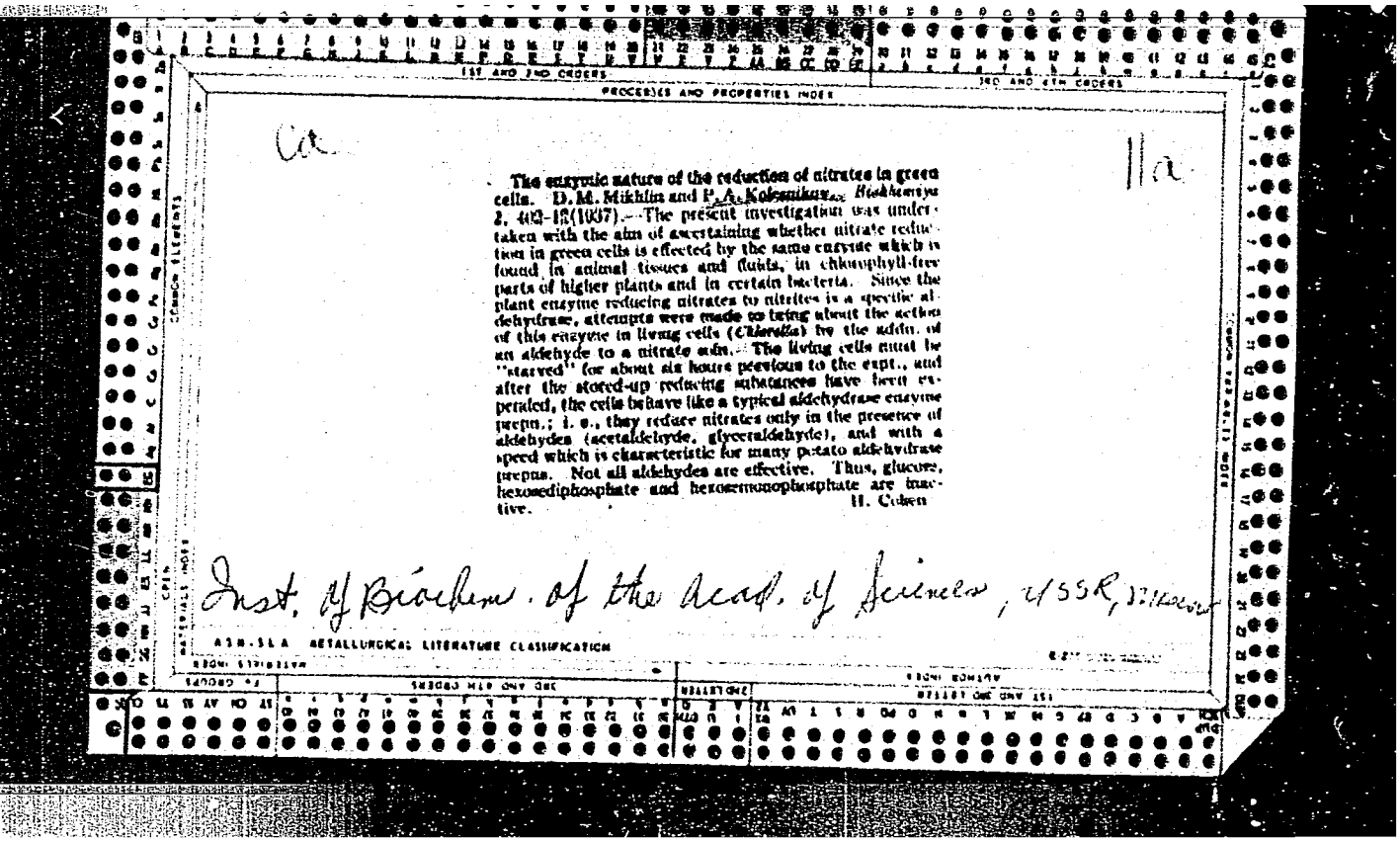
KOLESNIKOV P.A. (Moskva)

Classification of clothing items and materials for their manufacture.
Shvein.prom. no.5:4-8 S-O '65. (MIRA 18:10)

PETROCHENKO, Ye.I.; KOLESNIKOV, P.A.

Oxidation of phloroglucin by wheat sprouts. Biokhimiia 29 no.5:889-895 Jl-Ag '64. (MIRA 18:11)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

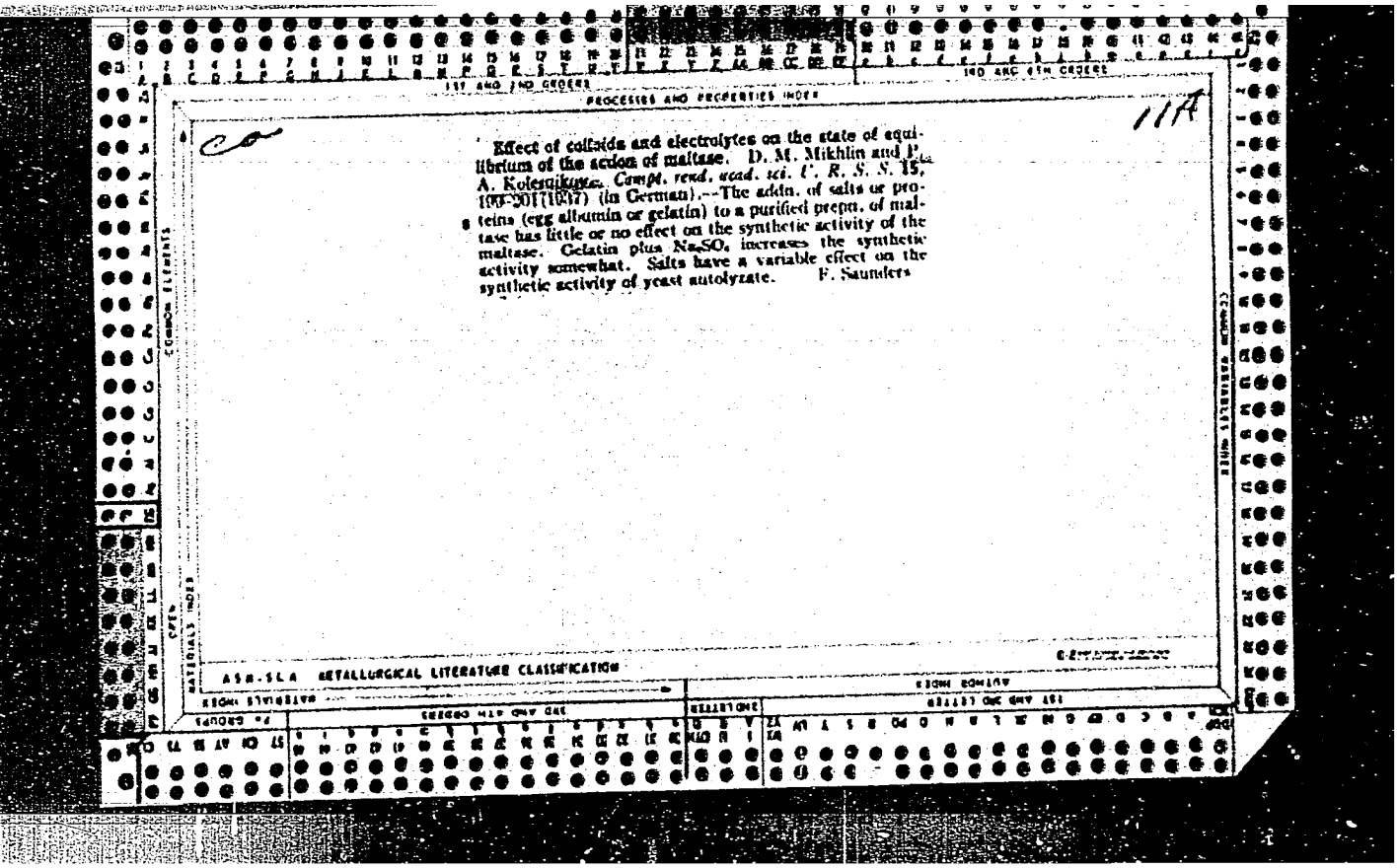
IIa

The enzymic nature of the reduction of nitrates in green cells. D. M. Mikhlin and P. A. Kolesnikov. *Biokhimiya* 2, 403-12(1937).—The present investigation was undertaken with the aim of ascertaining whether nitrate reduction in green cells is effected by the same enzyme which is found in animal tissues and fluids, in chlorophyll-free parts of higher plants and in certain bacteria. Since the plant enzyme reducing nitrates to nitrites is a specific aldehydrase, attempts were made to throw about the action of this enzyme in living cells (*Chlorella*) by the addn. of an aldehyde to a nitrate soln. The living cells must be "starved" (or about six hours previous to the expt., and after the stored-up reducing substances have been eliminated, the cells behave like a typical aldehydrase enzyme preps.; i. e., they reduce nitrates only in the presence of aldehydes (acetaldehyde, glyceraldehyde), and with a speed which is characteristic for many potato aldehydrase preps. Not all aldehydes are effective. Thus, glucose, hexosediphosphate and hexosemonophosphate are inactive.

H. Cohen

Inst. of Biochem. of the Acad. of Sciences, USSR, Moscow

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

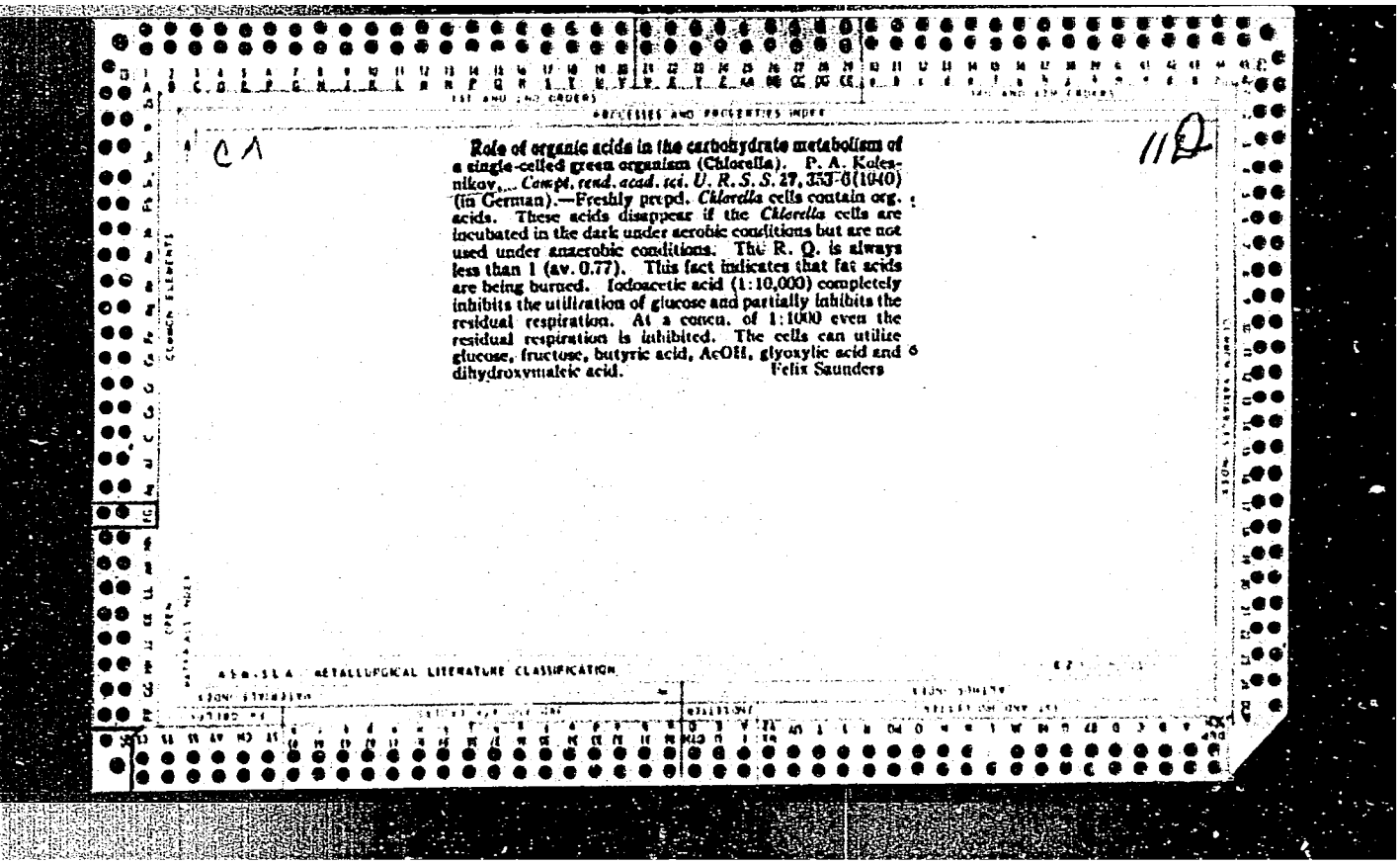


PROCESSES AND PROPERTIES INDEX

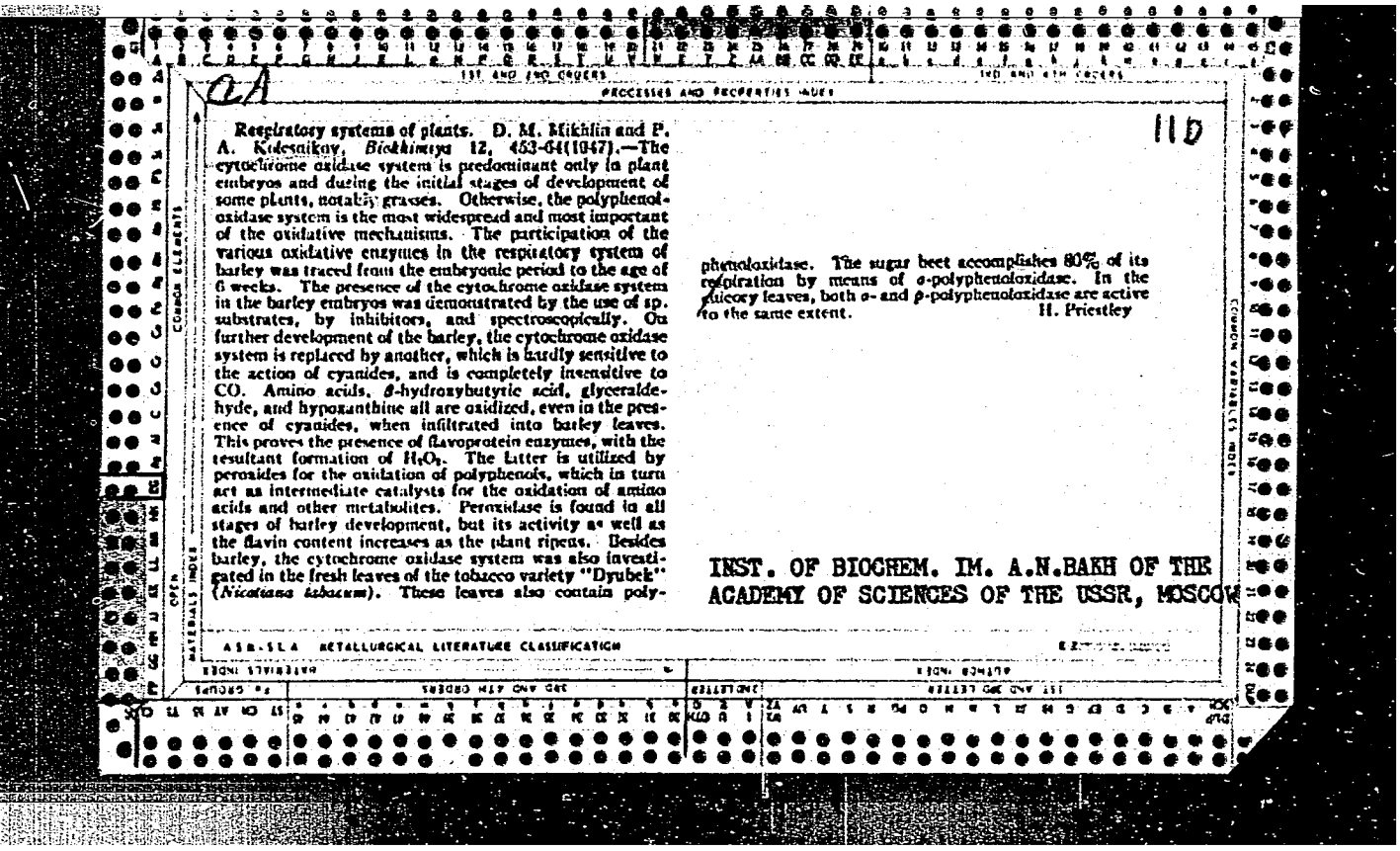
11A

Effect of colloids and electrolytes on the state of equilibrium of the action of maltase. D. M. Mikhlin and P. A. Kolesnikova. *Compt. rend. acad. sci. U. R. S. S.* 15, 199-201(1937) (in German).--The addn. of salts or proteins (egg albumin or gelatin) to a purified prepn. of maltase has little or no effect on the synthetic activity of the maltase. Gelatin plus Na_2SO_4 increases the synthetic activity somewhat. Salts have a variable effect on the synthetic activity of yeast autolyzate. F. Saunders

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

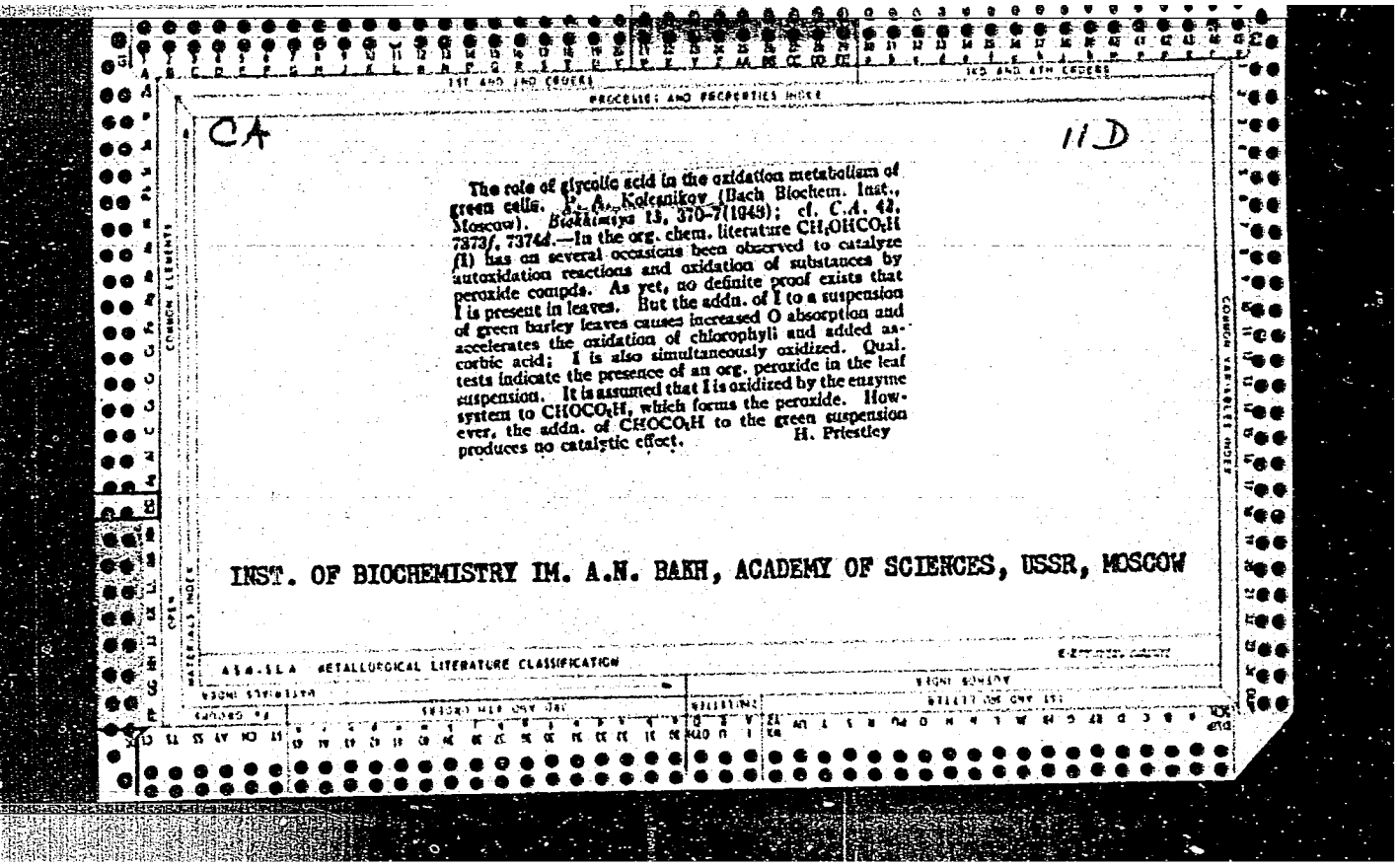


Role of organic acids in the carbohydrate metabolism of a single-celled green organism (Chlorella). P. A. Kolesnikov. *Compt. rend. acad. sci. U. R. S. S.* 27, 353-6 (1940) (in German).—Freshly prepd. *Chlorella* cells contain org. acids. These acids disappear if the *Chlorella* cells are incubated in the dark under aerobic conditions but are not used under anaerobic conditions. The R. Q. is always less than 1 (av. 0.77). This fact indicates that fat acids are being burned. Iodoacetic acid (1:10,000) completely inhibits the utilization of glucose and partially inhibits the residual respiration. At a concn. of 1:1000 even the residual respiration is inhibited. The cells can utilize glucose, fructose, butyric acid, AcOH, glyoxylic acid and dihydroxymaleic acid. Felix Saunders



Respiratory systems of plants. D. M. Mikhlin and P. A. Kidesnikov. *Biokhimiya* 12, 453-64(1947).—The cytochrome oxidase system is predominant only in plant embryos and during the initial stages of development of some plants, notably grasses. Otherwise, the polyphenol-oxidase system is the most widespread and most important of the oxidative mechanisms. The participation of the various oxidative enzymes in the respiratory system of barley was traced from the embryonic period to the age of 6 weeks. The presence of the cytochrome oxidase system in the barley embryos was demonstrated by the use of sp. substrates, by inhibitors, and spectroscopically. On further development of the barley, the cytochrome oxidase system is replaced by another, which is hardly sensitive to the action of cyanides, and is completely insensitive to CO. Amino acids, β-hydroxybutyric acid, glyceraldehyde, and hypoxanthine all are oxidized, even in the presence of cyanides, when infiltrated into barley leaves. This proves the presence of flavoprotein enzymes, with the resultant formation of H_2O_2. The latter is utilized by peroxides for the oxidation of polyphenols, which in turn act as intermediate catalysts for the oxidation of amino acids and other metabolites. Peroxidase is found in all stages of barley development, but its activity as well as the flavin content increases as the plant ripens. Besides barley, the cytochrome oxidase system was also investigated in the fresh leaves of the tobacco variety "Dyubek" (*Nicotiana tabacum*). These leaves also contain polyphenoloxidase. The sugar beet accomplishes 80% of its respiration by means of o-polyphenoloxidase. In the chicory leaves, both o- and p-polyphenoloxidase are active to the same extent. H. Priestley

INST. OF BIOCHEM. IM. A.N.BAKH OF THE ACADEMY OF SCIENCES OF THE USSR, MOSCOW

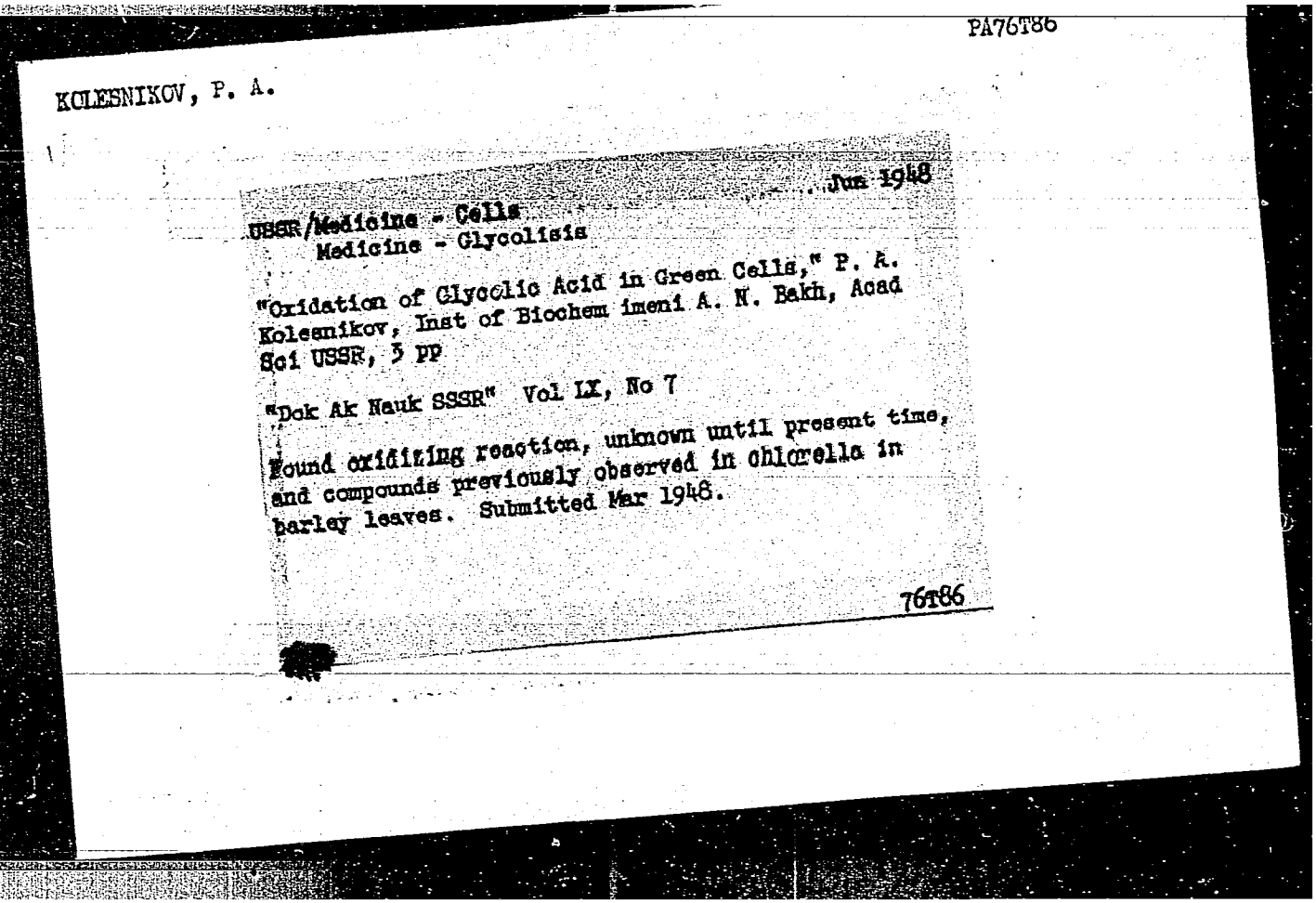


CA

11D

The role of glycolic acid in the oxidation metabolism of green cells. P. A. Kolesnikov (Bach Biochem. Inst., Moscow). *Biokhimiya* 13, 370–7(1948); cf. *C.A.* 42, 7373*f*, 7374*d*.—In the org. chem. literature CH_2OHCO_2H (I) has on several occasions been observed to catalyze autoxidation reactions and oxidation of substances by peroxide compds. As yet, no definite proof exists that I is present in leaves. But the addn. of I to a suspension of green barley leaves causes increased O absorption and accelerates the oxidation of chlorophyll and added ascorbic acid; I is also simultaneously oxidized. Qual. tests indicate the presence of an org. peroxide in the leaf suspension. It is assumed that I is oxidized by the enzyme system to $CHOCO_2H$, which forms the peroxide. However, the addn. of $CHOCO_2H$ to the green suspension produces no catalytic effect. H. Priestley

INST. OF BIOCHEMISTRY IM. A.N. BAKH, ACADEMY OF SCIENCES, USSR, MOSCOW



PA76T86

KOLESNIKOV, P. A.

Jun 1948

USSR/Medicine - Cells
Medicine - Glycolisis

"Oxidation of Glycolic Acid in Green Cells," P. A. Kolesnikov, Inst of Biochem imeni A. N. Bakh, Acad Sci USSR, 5 pp

"Dok Ak Nauk SSSR" Vol LX, No 7

Found oxidizing reaction, unknown until present time, and compounds previously observed in chlorella in barley leaves. Submitted Mar 1948.

76T86

KOLESNIKOV, P. A.

USSR/Chemistry - Chlorophyll, Oxidation of Jun 1948
Chemistry - Glycolic Acid, As Catalyst

"The Catalytic Action of Glycolic Acid on the Oxidation of Chlorophyll in Pulverized Leaves," P. A. Kolesnikov, Inst of Biochem imeni A. N. Bakh, Acad Sci USSR, 3 pp

"Dok Ak Nauk SSSR" Vol LX, No 8

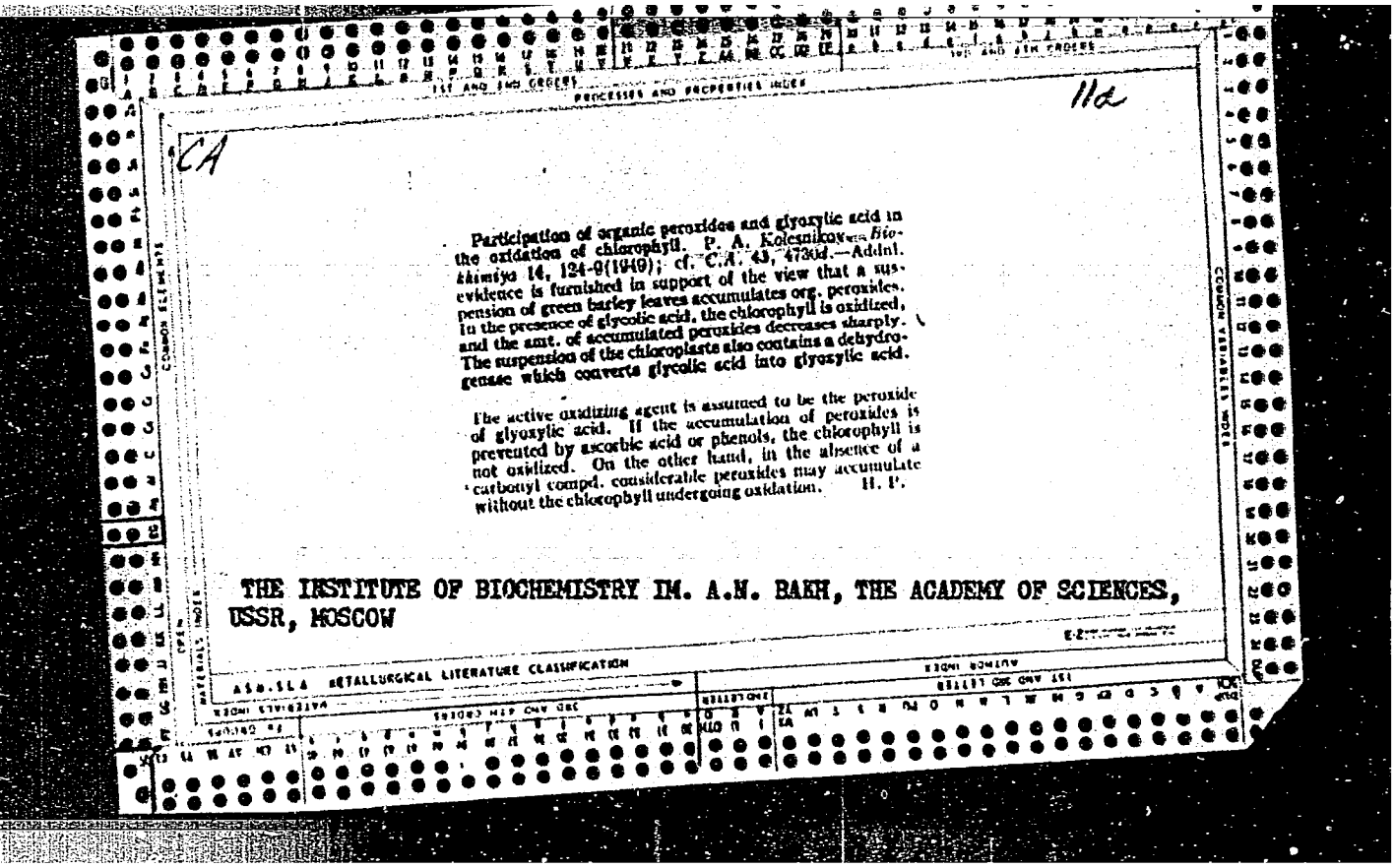
Show that pulverized barley leaves in suspension oxidize glycolic acid. Tests determine the effect of centrifuging the suspension on the causes for increased absorption of oxygen by glycolic acid. Submitted by Acad A. I. Oparin 26 Mar 1948.

78T15

KOLESNIKOV, P. A.

"Conversion of Carbon Compounds in Plant Cells," Iz. Ak. Nauk SSSR, Ser. Biol., No. 3, 1949.

Inst. Biochemistry im. A. N. Bakh, AS USSR



112

CA

Participation of organic peroxides and glyoxylic acid in the oxidation of chlorophyll. P. A. Kolesnikov. *Biokhimiya* 14, 124-9(1949); cf. C.A. 43, 4736d.—Addnl. evidence is furnished in support of the view that a suspension of green barley leaves accumulates org. peroxides. In the presence of glycolic acid, the chlorophyll is oxidized, and the amt. of accumulated peroxides decreases sharply. The suspension of the chloroplasts also contains a dehydrogenase which converts glycolic acid into glyoxylic acid.

The active oxidizing agent is assumed to be the peroxide of glyoxylic acid. If the accumulation of peroxides is prevented by ascorbic acid or phenols, the chlorophyll is not oxidized. On the other hand, in the absence of a carbonyl compd. considerable peroxides may accumulate without the chlorophyll undergoing oxidation. H. P.

THE INSTITUTE OF BIOCHEMISTRY IM. A.N. BAKH, THE ACADEMY OF SCIENCES, USSR, MOSCOW

KOLESNIKOV, P. A. PA 26/49T3

USSR/Chemistry - Formaldehyde, Peroxide Jan 49
Chemistry - Peroxide, Organic

"Organic Peroxide From Green Leaves," P. A. Kolesnikov, Inst of Biochem imeni A. N. Bakh, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXIV, No 1

Describes method for separating peroxide of formaldehyde from green extract. Submitted 2 Nov 48.

26/49T3

C.A.

11.4

Some reduction-oxidation reactions in suspensions of chloroplasts and chlorophyll grains. P. A. Kolesnikov (A. N. Bakh Biochem. Inst., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1950, No. 4, 87–99.—Chloroplasts and chlorophyll granules contain a reduction-oxidation enzyme that reduces nitrates and nitrites; the presence of α-hydroxymonocarboxylic acid oxidase is also demonstrable and it appears that both the enzymes are identical, on the basis of their behavior. Chloroplasts and granules reduce quinone in light, with evolution of O and CO_2, possibly through intermediacy of the above enzyme system. Hydroxylamine inhibits this reaction. The chemistry of the possible reactions is discussed.

G. M. Kosolapoff

CA

Participation of glyoxylic acid in the assimilation of nitrate nitrogen by green leaves. P. A. Kolesnikov (Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 71, 911-14(1950).—Nitrates enter the leaves of plants and are acted upon by glyoxylic acid forming nitrites and H_2NOH. The latter reacts with glyoxylic acid, forming oximes and other as yet unknown substances. The principal site of nitrate assimilation appears to be in the leaves. Leaves of barley tend to concentrate nitrates largely in the leaf membrane, while kok-saghyz concentrates nitrates mainly in the leaf veins. The reduction to nitrites is assocd. with chloroplasts and chlorophyll granules, the suspension of which in the liquid medium reveals the presence of substances that decompose into glyoxylic acid on heating (these precursors may be related to allantoic acid). Either in light or in darkness the amt. of nitrates declines when glyoxylic acid is detectable in the system; the resulting nitrites are rapidly converted further into hydroxylamine and other substances, in a reaction in which glycolic acid participates. But even H_2NOH is convertible again and addn. of its solns. to the green matter suspensions yields nitrites, oximes (in part, of glyoxylic acid), and unknown N-contg. compds., in a reaction that proceeds both in the light and in the dark phases. One of the unknown N derivs. may be allantoin. G. M. K.

CA

IID

Oxidative enzymes in barley leaves. P. A. Kolesnikov (Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* **71**, 1085–8(1950).—The leaves do not contain phenoloxidase and cytochromeoxidase; however, appreciable amts. of lipoxidase are found as are the oxidases of α-hydroxy monocarboxylic acids, which are usually found in leaves of plants that are rich in phenoloxidase or cytochrome oxidase (kok-saghyz, tobacco). The previously reported oxidation of chlorophyll in simultaneous presence of glycolic acid and nitrites for other plants is confirmed with barley. The possible chemistry of the process is discussed.
G. M. Kosolapoff

Carboxylase of kok-saghyz. P. A. Kulesnikov (A. N. Bakh Biochem. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 85, 611-14(1952).—Suspensions of leaves, roots, or latex from fresh plants do not carry detectable carboxylase and do contain inhibitors of yeast carboxylase. In wilted roots the inhibitor is absent and active carboxylase can be readily detected by the Warburg technique in 1/15 *M* phosphate buffer using 0.1 *M* Na pyruvate substrate. During 1st 6 hrs. all pyruvic acid utilized yields AcH, but after longer periods the amounts of AcH do not reach the theoretical values; although a little acetoin is detected the fate of the rest of the AcH is unknown. Roots wilted for 9 days show increased respiratory coeff. increased by addn. of pyruvic acid; after immersion in H_2O for several days the respiratory coeff. returns to normal and the pyruvic acid effect does not operate. The inhibitor does not appear to be the traces of Cu or quinones that are present. It may be related to the factor described by Evans, *et al.* (*Biochem. J.* 46, No. 5, xxxviii(1950)). G. M. Kosolapoff

KOLESNIKOV, P. A.

Kok-Saghyz

Quinones and localization of phenolase in kok-saghyz. Dokl. AN SSSR 85 no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953, Uncl.

KOLESNIKOV, P. A.

"The Biochemistry of Respiration of Green Cells." Dr Biol Sci, Inst of Biochemistry, Acad Sci USSR, Moscow, 1953. Dissertation (Referativnyy Zhurnal--Khimiya Moscow, No 2, Jan 54)

SO: SUM 136, 19 Aug 1954

KOLESNIKOV, P.A.

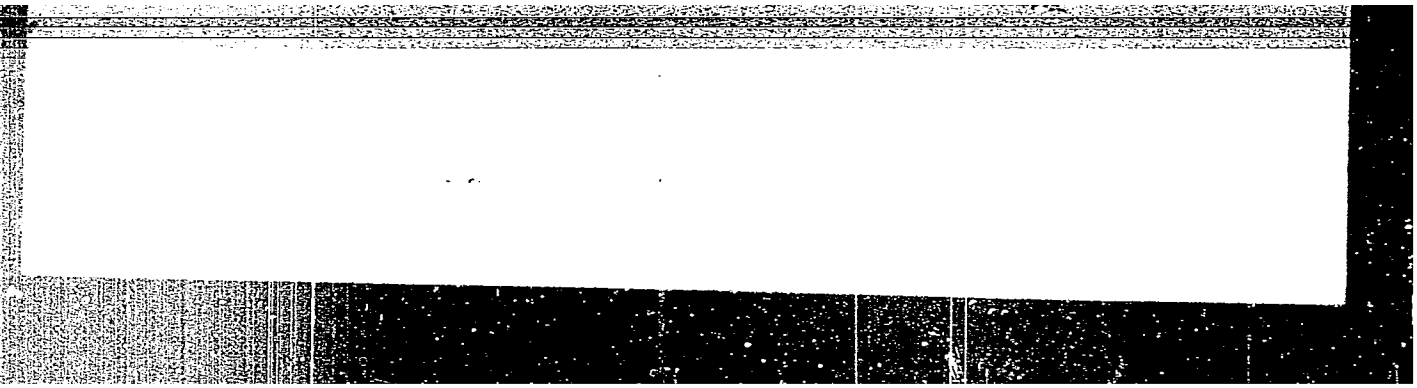
Oxidation of glyoxal in extracts from green leaves. Doklady Akad. Nauk S.S.S.R. 90, 221-4 '53. (MLRA 6:4)
(CA 47 no.17:8839 '53)

1. A.N.Bakh Biochem. Inst., Moscow.

KOLESNIKOV, P.A.

USSR

Glycolic acid oxidase in green plants. P. A. Kolesnikov, *Uspekhi Sovremennoi Biol.* 36, 139–42(1953).—The prosthetic group of glycolic acid oxidase is flavine mononucleotide; the product of oxidation is glyoxylic acid. The oxidation is not inhibited by cyanide, Na azide, or by diethyldithiocarbamate. It is significantly inhibited by iodoacetate, malonate, and hydroxylamine. The optimal pH is 8.3; Michaelis const., 3.8×10^{-4} *M*. The oxidation of glycolic acid to formic acid and CO_2 is not due to the action of glycolic acid oxidase but to H_2O_2, which is produced during the oxidation of glycolic acid to glyoxylic acid, the latter being acted upon by H_2O_2 to yield the formic acid and CO_2. Glycolic acid oxidase can perform the function of a dehydrogenase. It is widely distributed in green plants, but it is apparently absent in seeds, embryonic tissues, roots, and in nongreen portions of leaves of all plants exam'd. With exposure of potato tubers to light the activity of glycolic acid oxidase appears with the appearance of chlorophyll. Glycolic acid oxidase is present only in those cells which are capable of forming chlorophyll or in those which contain chlorophyll. In the course of glycolic acid activity chlorophyll is decolorized, and it has been proposed by K. that glycolic acid oxidase in green plants is concerned indirectly with the synthesis of chlorophyll. The basic source of porphyrins is glycine and succinate (Oodnev and Terent'ev *Izvest. Akad. Nauk Belorussk. S.S.R.* 1951 No. 6, 71); and it is possible, therefore, that from the product of oxidation of glycolic acid (glyoxylic acid) glycine is formed via transamination with glutamic acid. From the products of transamination arise substrates which participate in porphyrin synthesis and hence in chlorophyll formation. Thus, in the course of activity of glycolic acid oxidase conditions arise which favor the degradation as well as the synthesis of chlorophyll. Therein lies the probable role of glycolic acid oxidase in green plants. More exptl. proof is needed for the presumed role of glycolic acid oxidase in respiration and photosynthesis. J. A. Stekol



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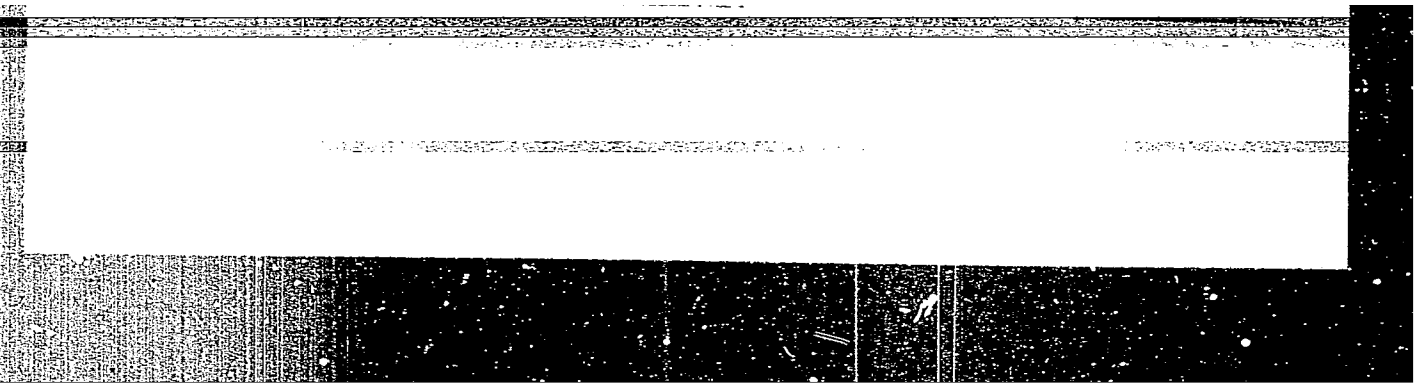
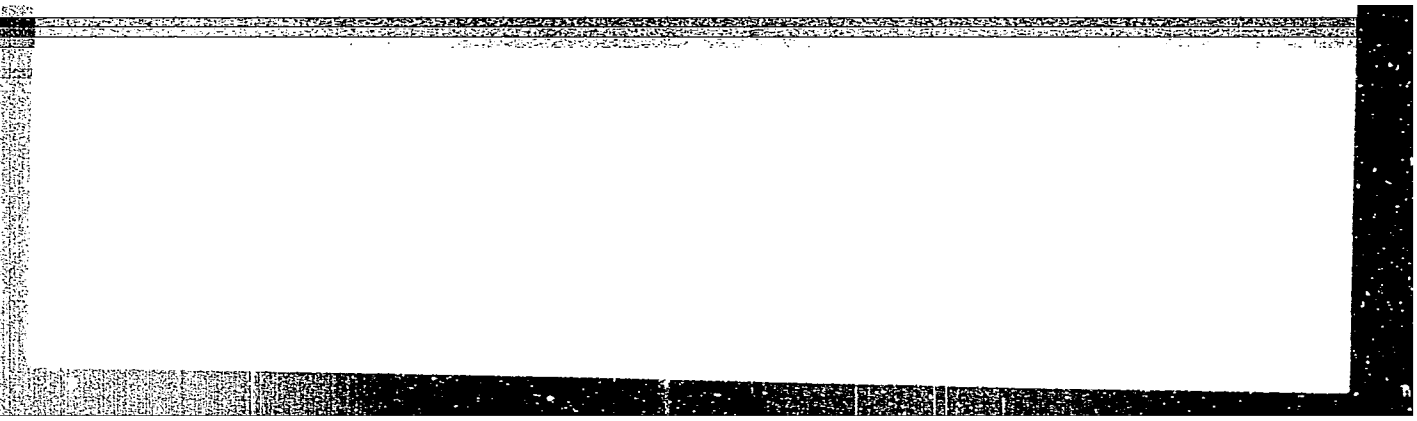




APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000723810013-6"

Колесников П.А.

KOLESNIKOV, P.A.

Quantitative determination of carbonyl compounds and secondary and tertiary alcohols in small samles of vegetable matter [with summary in English]. Biokhimiia 22 no.4:622-625 Jl-Ag '57. (MIRA 10:11)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(PLANTS--CHEMICAL ANALYSIS) (CARBONYL COMPOUNDS)
(ALCOHOLS)

Kolesnikov, P.A.

USSR/Plant Physiology - Respiration and Metabolism. I-3

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15193

Author : Kolesnikov P.A.

Inst : Biochemical Institute, Academy of Sciences USSR

Title : Distribution of Glycolic Acid Oxidase in the Leaves of Plants.

Orig Pub : Dokl. AN SSSR, 1957, 112, No 5, 909-910

Abstract : Glycolic acid oxidase activity in leaves of trees and brushwood plants was determined in Nikita Botanical Garden (in Yalta) in April-May of 1956. Oxidase activity was greater in the majority of foliate trees than in conifers. In a few cases the ferment was not discovered because of the intense staining of the extract (Japanese aucuba, olives, medlar) or the precipitation of the ferment in rubbing (conifers). This work was carried out in

Card 1/2

USSR/Plant Physiology - Respiration and Metabolism. I-3

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15193

the Biochemical Institute of the Academy of Sciences of the Union of Soviet Socialist Republics.

Card 2/2

KOLESNIKOV, P.A.; ZORE, S.V.

Anthocyanin formation in wheat shoots induced by visible and invisible ultraviolet light. Dokl.AN SSSR 112 no.6:1079-1081 F '57. (MLRA 10:5)

1.Institut biokhimii im. A.N. Bakha Akademii nauk SSSR. Predstavleno akademikom A.I. Oparinym.
(Anthocyanins) (Ultraviolet rays--Physiological effect) (Wheat)

KOLESNIKOV, P.A.

28-58-2-14/41

AUTHOR: Kolesnikov, P.A., Candidate of Technical Sciences

TITLE: The Classification of Consumer Fabrics (Klassifikatsiya tkaney bytovogo naznacheniya)

PERIODICAL: Standartizatsiya, 1958, Nr 2, pp 42-43 (USSR)

ABSTRACT: Inconsistencies are pointed out in the existing standard and trade (price list) classification of textiles, and a different classification system is recommended. This system would classify textiles by the use (bedding, skirt-material, shirt-material, etc.) and by groups, by the kind of fiber and production processes. It is said that the scientific research organizations must work out standard requirements for properties and quality of textiles.

ASSOCIATION: VNII shveynoy promyshlennosti (VNII of the Sewing Industry)

AVAILABLE: Library of Congress

Card 1/1 1. Textiles-Classification 2. Standardization-USSR

KOLESNIKOV, P.A.

Photo-oxidation of phenols, senzitized by riboflavin [with summary in English]. Biokhimiia 23 no.3:434-439 My-Je '58 (MIRA 11:8)

1. Institut biokhimii im. A.N. Bakha AN SSSR, Moskva.
(VITAMIN B2, effects,
on phenols photo-oxidation (Rus))
(PHENOLS,
photo-oxidation, eff. of vitamin B2 (Rus))

17(3)

AUTHORS: Kolesnikov, P. A., Petrochenko, Ye. I., Zore, S. V. SOV/20-123-4-44/53

TITLE: Fermentative Reduction of Quinone by Glycolic Acid (Fermentativnoye vosstanovleniye khinona glikolevoy kislotoy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4, pp 729-732 (USSR)

ABSTRACT: The first mentioned author has found earlier that glycolic acid accelerates the transformation of p-benzoquinone in centrifuged homogenates of barley leaves (Ref 1). It was assumed that glycolic acid reduces p-benzoquinone in the presence of the oxidase of glycolic acid. Besides these two compounds various phenol derivatives are widespread in green plants which can be oxidized to quinone. Possibly, phenols and quinones are components of respiratory systems (Ref 2). The process mentioned in the title is a hardly explained part of these systems. It was therefore interesting to carry out a detailed investigation of the reduction mechanism. For the production of ferment preparations the small leaves of the

Card 1/3

Some assumptions mentioned in publications (Ref 2) are given.

Card 2/3

Fermentative Reduction of Quinone by Glycolic Acid SOV/20-123-4-44/53

shoots of barley of the type Wiener (Viner) as well as leaves of Trapezond-type tobacco were used. It was found that aqueous yellow solutions of p-benzoquinone remaining at room temperature turn red. This process is accelerated by increasing pH-values; p-benzoquinone is consumed and smaller quantities of oxygen are adsorbed. In the solution hydroquinone can be detected in first approximation in a quantity that is proportional to the intensity of the red coloration and the p-benzoquinone used but not to the quantity of oxygen absorbed. Besides the transformation of p-benzoquinone into hydroquinones some oxidative processes seem to take place in the aqueous solution, which are not taking part in the mentioned transformation. It was found that some preparations synthesized from the green leaves accelerate the transformation just mentioned. The addition of glycolic acid increases this acceleration (Table 1). Since the red color is considerably decreased by the addition of glycolic acid an inhibition of the formation of the colored compounds by the glycolate must be assumed, which is formed in the spontaneous transformation of p-benzoquinone. The methods of the transformation of p-benzoquinone have not been explained experimentally. Some assumptions mentioned in publications (Ref 2) are given.

Card 2/3

The red coloration probably comes from polymerization products. According to the authors' opinion the last mentioned inhibition tends to show that the quinone reduction takes place directly at the expense of the hydrogen of the glycolate and of the oxidation energy of the glycolate. Thus, the stage of the formation of oxy-hydroquinone is avoided. This process is proved by the formation of glyoxylic acid besides hydroquinone (Table 1). It may be seen therefrom that the glycolate accelerates the quinone transformation only by such preparations that contain the oxidase of glycolic acid. This takes place the more rapidly the more active this oxidase is. There are 1 table and 4 references, 2 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (Institute of Biochemistry imeni A. I. Bakh, Academy of Sciences, USSR)

PRESENTED: July 31, 1958, by A. I. Oparin, Academician

SUBMITTED: July 29, 1958

KOLESNIKOV, P. A.; PETROCHENKO, Ye.I.; ZORE, S.V.

Interaction of glycolic acid oxidase and polyphenoloxidase.
Fiziol. rast. 6 no.5:598-603 S-O '59. (MIRA 13:2)

1.A.N. Bakh Institute of Biochemistry, U.S.S.R. Academy of Sciences Moscow.
(Glycolic acid oxidase) (Phenolase) (Plants—Metabolism)

KOLESNIKOV, P.A. (Moskva)

Interrelation between respiration and photosynthesis. Usp. sovr.biol. 47 no.3:362-374 My-Je '59. (MIRA 12:10)
(PHOTOSYNTHESIS
interrelation between resp. & photosynthesis, review (Rus))
(METABOLISM, TISSUE,
tissue resp., relation to photosynthesis, review (Rus))

17 (3)

AUTHORS: Kolesnikov, P. A., Petrochenko, Ye. I. SOV/20-127-6-43/51

TITLE: On Free Radicals in the Peroxidase Oxidation and Photooxidation of p-Cresol

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1297 - 1300 (USSR)

ABSTRACT: The products isolated among the products of the oxidation mentioned in the title (Ref 9), and also those of the chemical oxidation (Refs 6-8), namely: tetrahydrobenzopyrone (I), 2,2'-dioxy-5-5'-dimethylbiphenyl (II), as well as a triphenyl analogon (III), induced several investigators to consider the process of formation of these substances as proceeding over free radicals (Refs 5,8,10). All these products are colorless substances insoluble in water. The authors obtained products with these properties in the following ways: 1) By the action of light on p-cresol solutions in the presence of riboflavin (Ref 11); 2) By means of crystalline peroxidase of Messrs Light and Co Ltd; 3) By the action of potassium ferricyanide (Ref 6). In the oxidation of p-cresol, either by impurified or purified polyphenol oxidases from potato, no white or other insoluble

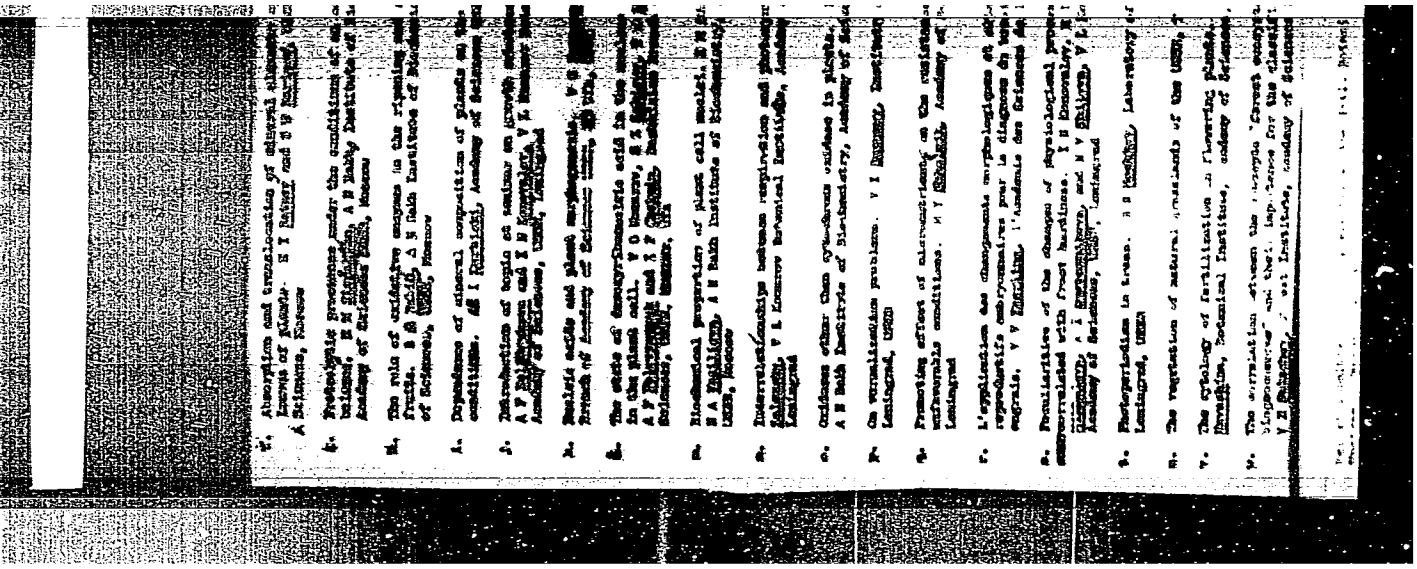
Card 1/3

product was formed, but a red-brown substance soluble in water. The "photoproduct" dissolves completely in slightly alkalized water. It precipitates again after acidification, Its solubility in acetone, benzene, methyl- and ethyl alcohol, ether, ethyl acetate, and chloroform, is very good. Neither the "peroxidase-" nor the "chemical" product dissolve completely in alkalized water, alcohol, or ether. They were both separated in 5%-NaOH into a soluble and an insoluble fraction (Ref 6). Table 1 shows the results of chromatographing (khromatografirovaniye) the photooxidation product. No other substances could be detected besides the one which forms spots with the values of R_f (see Table 1). Also the bi-dimensional chromatography was not able to separate the said substance: its melting point was 74°. Further constants of this substance are indicated. Its molecular weight of 394.5 is similar to that of the quater-phenyl analogon which consists of 4 dehydrogenated p-cresol molecules $(C_7H_7O \cdot C_7H_6O)_2$, and has a molecular weight of 426. On the other hand, the calculations of the empirical formula of the isolated product show that this substance con-

sists of (C_6H_6O)-units. 4 such units would yield a substance $(C_6H_6O)_4$ with a molecular weight of 376, which is also similar to the isolated substance. The products obtained by the authors are, however, not similar to the products already described and mentioned above, either by their melting point, or molecular weight, or elementary composition. As is known, the reactions of the free radicals are inhibited by polyphenols (Ref 17). This produced 0.005 mg/ml of hydroquinone in proportion to the said white product. The peroxidase oxidation was inhibited by 0.6 mg/ml of hydroquinone. Further investigations of these problems are necessary. There are 1 table and 26 references, 6 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (Institute of Biochemistry imeni A. N. Bakh of the Academy of Sciences, USSR)

PRESENTED: May 12, 1959, by A. I. Oparin, Academician
SUBMITTED: May 12, 1959



KOLESNIKOV, P.A.

Hydrogen donors and acceptors in oxidation-reduction reactions proceeding with the participation of riboflavin. Dokl.AN SSSR 133 no.6:1462-1464 Ag '60.
(MIRA 13:8)

1. Institut biokhimii im. A.N. Bakha Akademii nauk SSSR. Predstavleno akad. A.I.Oparinym.
(RIBOFLAVIN) (OXIDATION-REDUCTION REACTION)

KOLESNIKOV, P.A. [Kolesnikov, P.O.]; EYNOR, L.O.

Study of oxidases containing metals in Chlorella. Ukr.bot.zhur. 18 no.4:46-51 '61. (MIRA 14:8)

1. Institut biokhimii im. A.N.Bakha AN SSSR i Institut botaniki AN USSR.

(Algae) (Oxidase)

PETROCHENKO, Ye.I.; KOLESNIKOV, P.A.

Phenol and ascorbic acid oxidation in wheat germination.
Biokhimiia 26 no.4:701-707 Jl-Ag '61. (MIRA 15:6)

1. Institute of Biochemistry, Academy of Sciences of the USSR, Moscow.

(PHENOLS) (WHEAT)
(ASCORBIC ACID)

PSHENOVA, K.V.; KOLESHNIKOV, P.A.

Lipoxidase in wheat seedlings. Biokhimiia 26 no.6:1008-1012 N-D '61. (MIRA 15:6)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., Moscow.

(LIPOXIDASE)
(WHEAT)

KOLESNIKOV, P.A.; ZORE, S.V.

Qualitative changes in the phenol composition of the coleoptiles of wheat during growth inhibition by light. Fiziol.rast. 9 no.4: 454-460 '62. (MIRA 15:9)

1. A.N.Bakh Biochemistry Institute, U.S.S.R. Academy of Sciences, Moscow.

(PHENOLS) (PLANTS, EFFECT OF LIGHT ON)

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(Codehydrogenase) (Chlorella)

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(ASCORBIC ACID) (PEROXIDASES) (FLAVONE)

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(GLYOXYLIC ACID)

MUTUSKIN, A.A.; PSHENOVA, K.V.; KOLESNIKOV, P.A.

Biological role of the nonhemin iron of wheat germs. Dokl. AN SSSR 150 no.1:184-187 My '63. (MIRA 16:6)

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(Wheat germ) (Iron) (Hemins)

KOLESNIKOV, P.A.; ZORE, S.V.

Products of peroxidase oxidation and the photooxidation of ascorbic acid sensibilized by riboflavin in the presence of morin. Dokl. AN SSSR 150 no.3:680-683 My '63. (MIRA 16:6)

1. Institut biokhimii im. A.N. Bakha AN SSSR. Predstavleno akademikom A.I. Oparinym.
(Oxidation, Physiological)
(Riboflavin) (Ascorbic acid)

KOLESNIKOV, P. A.

ACCESSION NR: AP4012592 S/0021/64/000/002/0238/0241

AUTHOR: Eynor, L. O.; Tupik, N. D.; Kolesny*kov, P. O.

TITLE: Peroxidase of Chlorella

SOURCE: AN UkrRSR. Dopovidi, no. 2, 1964, 238-241

TOPIC TAGS: Chlorella, algae, green algae, enzyme, peroxidase, peroxidase oxidation, ascorbic acid, pyrogallol

ABSTRACT: The present work continues earlier investigations of the enzymes of Chlorella. Peroxidase was detected and readily extracted from acetone preparations of Chlorella by a phosphate buffer. Ascorbic acid is possibly the natural substrate of peroxidase and the latter is active in a wide range of pH values when ascorbic acid is used for that purpose, but peroxidase cannot be detected in the acid pH region when pyrogallol is used to determine it. This indicates a peculiarity, not explained, of peroxidase oxidation in Chlorella cells. Orig. art. has 3 tables.

Card 1/2

ACCESSION NR: AP4012592

ASSOCIATION: Insty*tut botaniky* AN UkrRSR (Institute of Botany, AN UkrRSR); Insty*tut biokhimiyi AN SRSR (Institute of Biochemistry, AN SSSR)

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Card 2/2

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(Krasnodar Territory--Hares)
(Plants, Protection of)

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